What Is Claimed Is:

Subf1 1. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of cameras having different visual fields from each other;

conversion means for converting images outputted from said cameras into images whose pixel units are equal in magnitude; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance of the object on the image to produce a depth image and outputting the depth image.

SUBB1) 2. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of cameras for producing images having different resolutions from each other;

conversion means for converting the images outputted from said cameras into images whose pixel units are equal in magnitude; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance to the object on the image to

produce a depth image and outputting the depth image.

3. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of first cameras for producing images having different resolutions from each other;

a plurality of second cameras having different visual fields from each other;

conversion means for converting the images outputted from said first and second cameras into images whose pixel units are equal in magnitude; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance to the object on the image to produce a depth image and outputting the depth image.

4. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of cameras for producing images having different visual fields from each other;

conversion means for converting the images produced by said cameras into images whose pixel units are equal in magnitude by parallel movement by different movement amounts; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance to the object on the image to produce a depth image and outputting the depth image.

SUB B2 5. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of cameras for producing images having different resolutions from each other;

conversion means for converting the images produced by said cameras into images whose pixel units are equal in magnitude by parallel movement by different movement amounts; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance to the object on the image to produce a depth image and outputting the depth image.

6. A three-dimensional structure estimation apparatus which measures a depth distance to an object on an image and outputs a depth image, comprising:

a plurality of first cameras for producing images having different resolutions from each other;

a plurality of second cameras having different visual fields from each other;

conversion means for converting the images produced by first and second said cameras into images whose pixel units are equal in magnitude by parallel movement by different movement amounts; and

a depth image production section for comparing the images whose pixel units are equal in magnitude to calculate a depth distance to the object on the image to produce a depth image and outputting the depth image.

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